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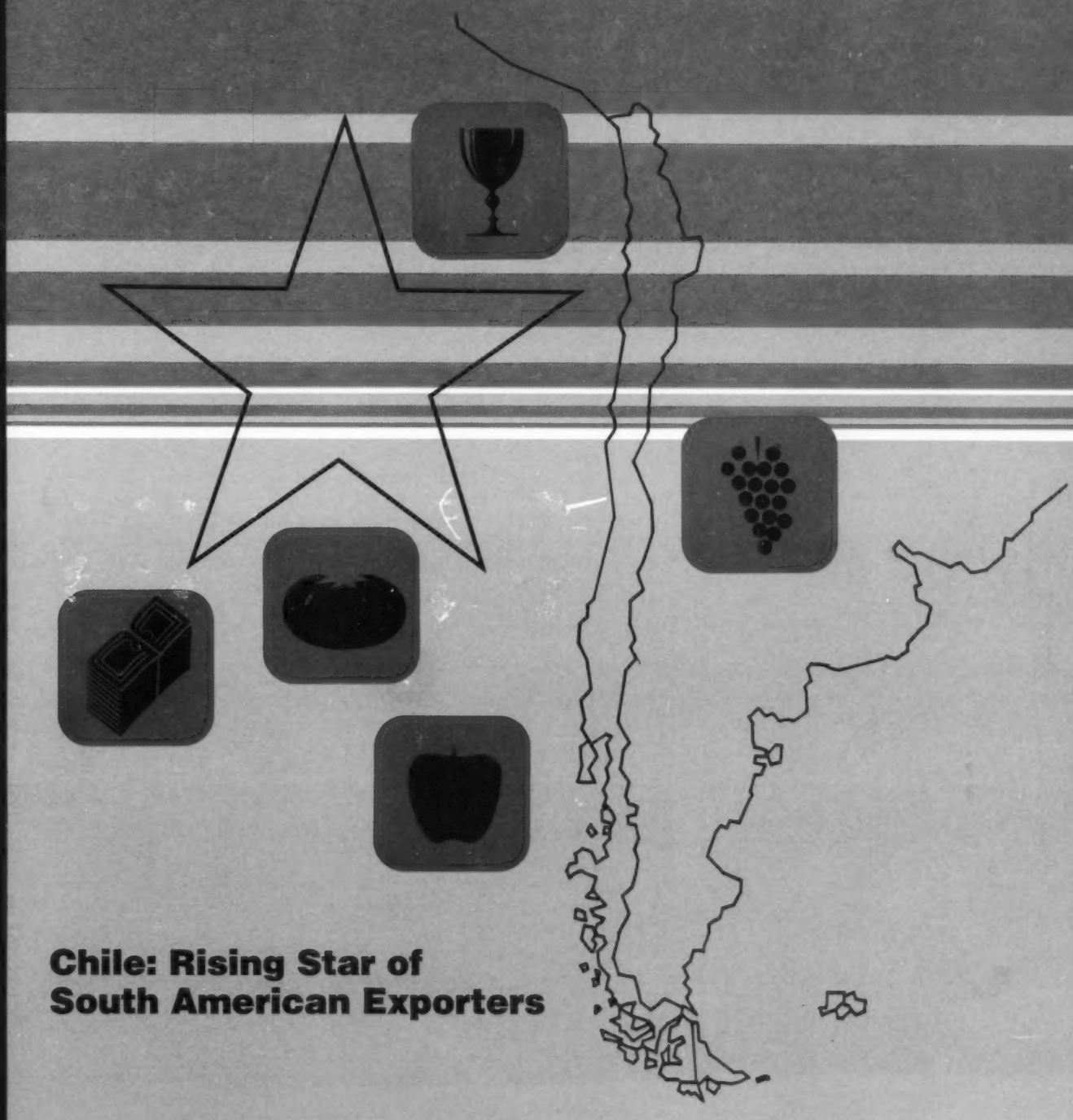

Chile: Rising Star of South American Exporters

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PERSPECTIVES

U.S. agricultural trade is off to a strong start in fiscal 1992 (October 1991-September 1992), according to the most recent data.

The U.S. agricultural trade surplus showed a healthy increase for the second straight month in November 1991. "With exports up by 19 percent and imports down by 3 percent, the total trade surplus for November gained $693 million over October's $1.46 billion," reports economist Susan Pollack of USDA's Economic Research Service. (December trade data became available on February 24.)

"Agricultural exports jumped by a hefty $632 million from October to November 1991, bringing the monthly total to $4.0 billion — the highest level since March 1990," says Pollack.

Commodities showing export gains during the month include soybeans and soybean products, cotton, corn, wheat, rice, vegetables, tobacco, and live animals. "The unusually large increases in cotton and soybean exports and higher-than-expected corn and wheat exports were partially due to October shipments being carried over into November trade statistics," says Pollack. Exports of meat products, hides and skins, nuts, and fruit declined.

Agricultural imports last November declined $62 million from the previous month to $1.9 billion. These early statistical trends indicate that U.S. agricultural trade is bouncing back from the levels of the previous fiscal year.

In fiscal 1991, U.S. agricultural exports fell for the first time in 5 years, declining $2.7 billion to $37.6 billion. "Softer prices for wheat and a lower volume of corn exports reduced grain exports by $3.5 billion from fiscal 1990," explains economist Steve MacDonald, also of ERS. "But exports of high-value products such as fruit and vegetables continued to climb, reaching a record $20.4 billion and exceeding the value of bulk exports for the first time."

U.S. agricultural imports for fiscal 1991 totaled $22.6 billion, unchanged from a year earlier. Lower exports and steady imports pared the fiscal 1991 agricultural trade surplus to $14.9 billion, down $2.7 billion from the previous year.

U.S. agricultural exports are forecast to make a comeback in fiscal 1992, rising $1.5 billion to $39 billion. "Increased exports of wheat, soybeans, and high-value products will account for most of the gain," MacDonald says.

Wheat prices will likely increase as U.S. stocks tighten, pushing up the value of U.S. exports. In addition, U.S. shipments of various commodities to the republics of the former Soviet Union are expected to rise slightly after dropping by more than $1 billion in fiscal 1991.

U.S. agricultural imports will likely decline slightly in fiscal 1992 to $22 billion, with reduced imports of beef and other animal products accounting for much of the decrease. "The combination of higher exports and lower imports is expected to raise the trade surplus by about $2 billion to $17 billion," MacDonald says.

— Priscilla B. Glynn

FARMLINE

AGRICULTURE...NATURAL RESOURCES...RURAL DEVELOPMENT
Practical economic intelligence from USDA's Economic Research Service

FEATURES

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Chile's agricultural exports jumped from less than $400 million in 1980 to $1.3 billion in 1990. Many factors have contributed to this export boom, including a climate favoring cultivation of fruit and vegetables during a growing season complementary to that of the Northern Hemisphere, economic policies that encourage production, and innovative marketing techniques.

U.S. Agriculture Continues Its Financial Recovery *Priscilla B. Glynn* 8

The Farm Costs and Returns Survey shows that in 1990, U.S. agriculture continued to regain strength after the economic difficulties of the early and mid-1980's. In 1989 and 1990, farm income reached record highs. Because 1989 was a particularly successful year for farmers, some indicators of the health of the agricultural sector were slightly less favorable in 1990 than the year before.

Mexico and the U.S. Linked by Strong Agricultural Trade *Doug Martinez* 12

This article takes a detailed look at U.S.-Mexican trade in a variety of commodities in recent years. How a North American Free Trade Agreement would affect trade between the two nations will depend on the specific provisions it contains. But the countries are working to resolve questions about regulation and use of pesticides on produce the United States imports from Mexico.

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Chile: Rising Star of South American Exporters

Chile has emerged as the star of South American agricultural exporters, according to economist John B. Parker, Jr., of USDA's Economic Research Service. Chile's agricultural exports, he notes, jumped from less than $400 million in 1980 to about $1.3 billion in 1990, a pace unsurpassed by any other South American nation.

Many factors boosted such spectacular growth, Parker notes, including overall economic policies that encouraged agricultural production, modernization of fruit marketing, and the Chileans' diligence in seeking export markets.

Chile leads South America as a fruit exporter. By volume and value, table grapes dominate its fruit exports. "Exports of excellent quality fresh grapes skyrocketed because of the reverse season," Parker says. Chile has carved out a market in Northern Hemisphere countries as a supplier of fresh fruit during the winter, when competitors depend on more expensive stored fruit.

Chile has carved out a market in the Northern Hemisphere as a supplier of fresh fruit during the winter.

Grape exports jumped from 231,000 tons in 1986 to 491,000 tons in 1990.

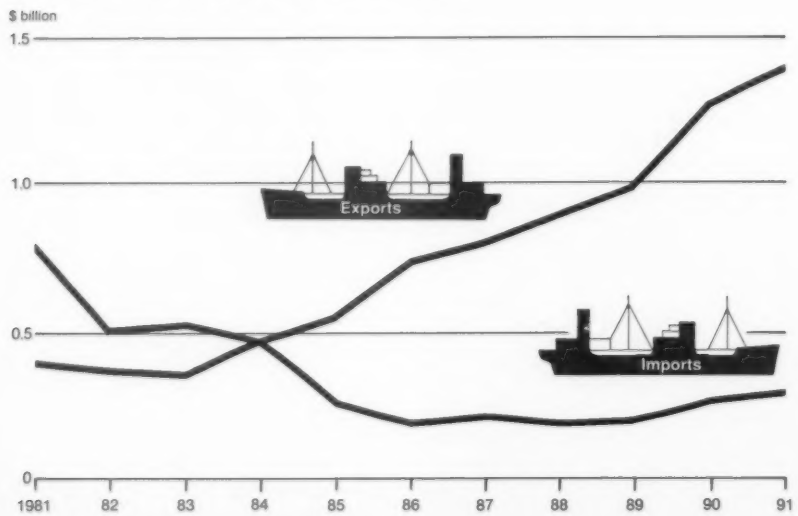
In fact, Chile may soon lead the world in grape exports, surpassing even Italy. The United States buys more than half of Chile's grape exports, the European Community (EC) about a fifth, and the Middle East a sixth.

Chile's second largest fruit export by volume and value is apples. In the late 1980's, Chile surpassed the United States as the largest apple exporter outside Europe. Major markets are the EC, followed by the Arabian Peninsula, Colombia, and Sweden.

Exports of other commodities also jumped. From 1980 to 1990, wine exports tripled to reach $52 million, with other Latin American countries and the United States the biggest markets. At the same time, fresh peach exports climbed from $10 million to $55 million. The United States, Saudi Arabia, and Sweden were the largest buyers.

The value of Chile's agricultural exports is more than four times as great as its imports of about $280 million annually. In its agricultural trade with the United States, the value of Chile's exports is more than eightfold that of its imports. The United States is Chile's largest market, receiving roughly 40 percent of its agricultural exports. The EC is the second largest export destination.

In 1991, the Value of Chile's Agricultural Exports Was More than Four Times as Great as Its Imports



Source: Food and Agriculture Organization, United Nations.

Many Reasons for Chile's Success

Traditionally, copper exports have led all other commodities in Chile's export earnings. But, as Parker notes, in the mid-1980's foreign demand for copper declined. The Chilean Government then strove to reduce its reliance on copper as the major export revenue earner by diversifying exports. The Government also tried to encourage employment, liberalizing banking procedures and adopting other measures to attract foreign investment for projects that required the hiring of labor.

Diversification of exports into agricultural crops was aided by Chile's climate, which resembles that of central California and favors the cultivation of fruit and vegetables. In the long, narrow coastal country, farms are often just a short distance from ports. Labor costs are low, and foreign exchange is readily available to import machinery, Parker says.

The Chilean Government took steps to encourage exporters, such as directing major expenditures for irrigation projects in the central valley, the key fruit-growing area. After being depressed from 1982 to 1986, copper prices rose in 1987, when total copper exports increased 18 percent to $5 billion. In the late 1980's and 1990, strong copper prices contributed to further gains.

In 1990, total copper exports reached a record $8.6 billion.

Another reason for boosting exports is that Chile's population, now 13 million, offered producers a limited domestic market. As a result, farmers realized the importance of foreign markets and attempted to meet their standards. Goods produced for the domestic market are sometimes inferior to those sold abroad.

Parker also attributes Chile's success to its modern banking policies, monetary reforms, devaluation of the peso, favorable investment climate, and market development techniques (such as advertising, service and quality control, and computer research and analysis to locate markets).

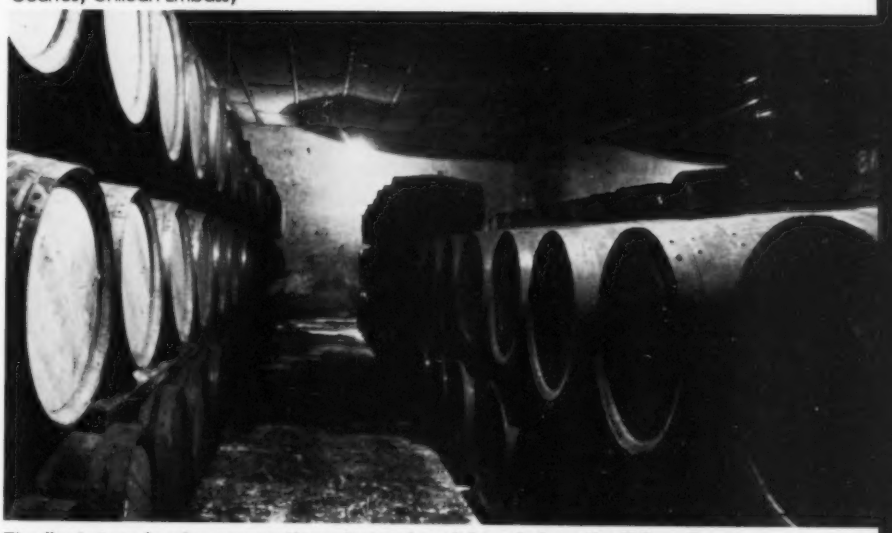
Unlike some developing countries, Chile permits easy foreign exchange of its currency. Some U.S. banks operate in Chile, enabling Americans in Chile to trade using U.S. accounts. Money can easily be wired to banks in the United States.

"Buying and selling in Chile is made easier by a minimum of red tape," Parker says. Quotes for goods are in U.S. dollars. In addition, Chile can purchase with U.S. dollars all necessary imported machinery, packaging items, and other supplies essential to produce or ship its goods.

"Many foreign investors feel welcome in Chile," Parker says, citing *International Financial Statistics* of 1991 by the International Monetary Fund, documenting the rise in foreign investment in the last 5 years. He also notes that many European and U.S. investors move to Chile and thereby contribute to its export success because they know importers, distributors, and buyers. Investors in the fruit industry often move to Chile because they deal in a perishable commodity and need day-to-day contact with the suppliers, Parker says.

He adds that if a European firm wants to build a cold storage facility for fruit, for example, it is easy to obtain a Chilean partner and invest. The Japanese have contributed venture capital to develop forest products, which has resulted in Chile's exporting lumber, paper, and wood furniture.

Courtesy Chilean Embassy



The final stage in wine preparation: storage in oak barrels from the U.S. or France

Americans who live in Chile can enjoy housing superior to that of most other Latin American countries and low living costs, Parker notes. Such housing is possible because the country has a large supply of natural resources for building materials as well as low labor costs.

Chile's marketing strategies have also helped it succeed as an exporter. Exporters do computer marketing studies to evaluate opportunities, using the resources of the United Nations' International Trade Center (which evaluates markets for developing nations, often free of charge). Chileans also have made good use of information on computer systems about world trade and niche markets. And they obtain information about the world market by sharing technology with U.S. firms.

Parker explains that Californian firms see Chile as more than just a competitor — in fact, they view it as a "season extender." The Chileans help California's fruit industry profit by increasing their use of preservation and distribution facilities which handle Chilean fruit during North America's off season. This means that the fixed costs per unit of fruit handled are lowered as the inactive period is reduced.

"Chileans have used computer programs to identify niche markets for 200 different commodities," explains Parker. The markets are primarily for reverse season fruit and vegetables. The wealthier nations, such as the United States, Japan, and those of the EC, as well as nearby Latin American countries, are more intensely researched and more frequently visited than such countries as Poland or Egypt. The computer also targets the competition, and the transportation and production required to export.

Meanwhile, the Government's export organization, Pro-Chile, maintains 31 offices in 22 countries, including the United States, those of the EC, and Japan, as well as Latin American nations. Pro-Chile has successfully identified new markets and improved access to many others.

"The Chilean agricultural marketing system is one of the most advanced in the world for identifying markets as a prelude to investment and production," Parker says.

Chile Improves Its Economic Footing

- In 1990, the Chilean economy grew for the seventh straight year, at an estimated 5 percent.
- The Government ran a 5-percent balance of payments surplus in 1990.
- In 1990, unemployment fell to 5 percent, the lowest in Latin America.
- Foreign investment, now totaling $6.6 billion, has been growing rapidly. Chilean bankers expect foreign investment to double within the next 3 years.
- Since the change to a free trade economy in 1973, Chile continues to meet payments on its foreign debt, making it a model for other debtor countries, according to *World Press Review*, July 1991.
- Based on trends in the last 5 years, factors favoring Chilean agriculture are the country's transition from an import substitution economy (emphasizing imports of such low-value crops as soybeans and wheat) to a trade-oriented one, and its success in exporting (which should result in an annual growth rate for exports of more than 10 percent through 1995).

Production of Other Crops Rising

Chile is also producing more crops for domestic use, including sugar and cereals. In fact, Chile is rapidly nearing self-sufficiency in sugar production.

The dairy industry has made what Parker terms a substantial comeback since the Government eliminated a pricing scheme for milk and milk products in 1981, a holdover from the Allende government (a socialistic regime that lasted from 1970 to 1973 under Salvador Allende Gossens). "At that time the pricing was too low to allow the farmers to profit or even pay operating costs," Parker explains.

Now farmers have begun expanding their dairy herds and increasing production to meet per capita consumption of milk and milk products. The value of U.S. exports of Friesian embryos and bull semen to Chile rose 63 percent in 1990 to $812,000. Per capita consumption of milk and milk products has been climbing steadily.

During 1989 and 1990, Chile nearly achieved self-sufficiency in grain production. Subsidies to producers have been in effect since 1983 and output has risen, thereby enabling Chile to reduce its wheat imports. Chile has the largest per capita wheat consumption of any South American country. Bread and pasta are the largest items consumed, by calories. Consumption of pork and poultry meat has increased with per capita income and now comprises 8 percent of the diet.

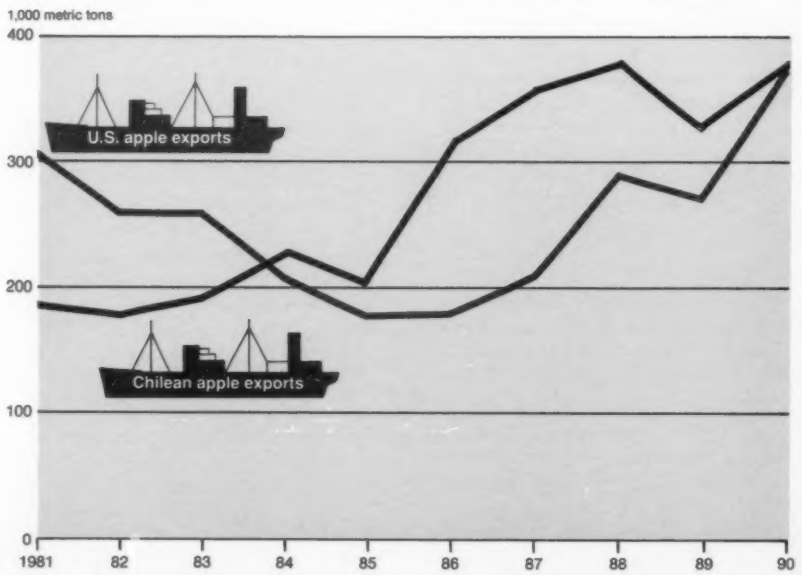
Export Gains Likely To Continue

Chile's fresh fruit industry is expected to continue to expand, according to projections by the Chilean Ministry of Agriculture, the *2000 Study* of the Food and Agriculture Organization of the United Nations, and the Inter-American Development Bank.

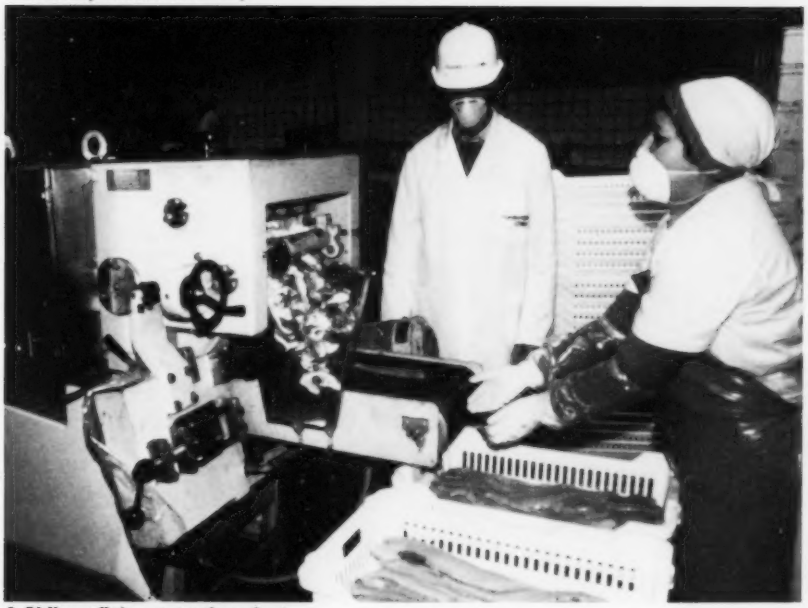
In the late 1980's, nearly 50 percent of fresh fruit exports were Thompson seedless table grapes. But, Parker says, the country is using the most up-to-date market development techniques to diversify into such products as plums, cherries, pears, kiwifruit, and strawberries.

Chile can supply fresh fruit when it is winter in the United States and Canada, and thus avoid competition with those countries. Mexico's grape exports reach their height in May and June following Chile's peak exports from February to April. Chile's success with fresh fruit exports demonstrates

The United States Faces Stiff Competition From Chile in the World Apple Market



Courtesy Chilean Embassy



A Chilean fish processing plant

how farmers and investors can obtain rapid returns in a free market economy or under liberalized trading conditions, Parker says.

"Forests are Chile's sleeping giant," adds Parker, referring to the 18 million acres of forest which have become a profitable investment. In the last 20 years, actual forest plantings have increased nearly tenfold. Over this time, exports of wood and forest products have soared nearly twentyfold, both in volume and in value. Chilean markets include the Middle East, New Zealand, Asia, Europe, and the United States.

The radiata pine, which dominates 3.5 million acres of tree farms, grows substantially faster than most natural pines in the United States and Europe, and has become a favorite investment.

Citing output, cuttings, marketing techniques, and markets, as well as rapid development to cut and process the wood, Parker anticipates Chilean exports of wood and wood products will continue to rise sharply. Within the next 15 years, their share of total export earnings is expected to increase from 2-3 percent to 10-20 percent.

Exports of fresh vegetables are expected to grow rapidly for the same reason exports of table grapes have zoomed — the reverse season. In general, Chile has reduced the unit cost of grape production through efficient irrigation, warehousing, and use of refrigerated ships and trucks.

Parker expects the same efficiency will be adopted for some fresh vegetables with a high value in niche markets, such as Belgian endive and romaine lettuce. In the past, lower prices, high transport costs, and greater perishability slowed Chile's efforts for such vegetable exports as onions, potatoes, and carrots.

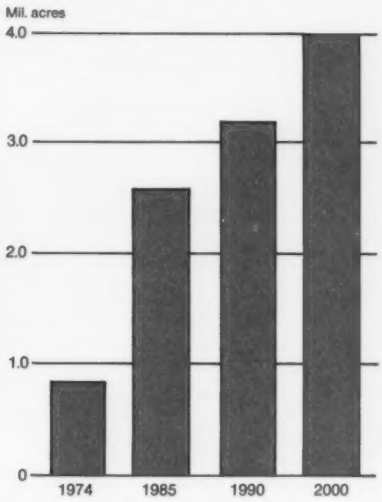
Tomato production has become lucrative for Chile's small producers. Since tomatoes yield returns the same year they are planted, they are ideal for farmers with small- and medium-size holdings who have little investment money. Parker foresees further gains for exports of tomato paste to the rest of South America, Japan, the Arabian Peninsula, and the United States. He points to rising demand in the United States and Japan, for instance, for such items as pizza toppings and spaghetti sauce.

The processed fruit and vegetable industry has developed along with fresh fruit, but with more limited success. Generally, higher import duties are imposed on Chilean canned products than on fresh items, according to Parker. The fastest growing item in the processed food industry is tomatoes. "The number of plants processing canned tomatoes and tomato paste has increased, and tomato paste exports rose to $40 million in 1990, double the average for 1984-86," Parker notes.

Trout and salmon farming has become lucrative in both the northern and southern parts of the country, especially near Chiloe Island. "Norwegians settling in Chile brought their expertise in salmon farming with them," notes Parker. Production of fresh fish is expected to expand. Most exports go to Japan and the United States. The fish is canned, smoked, or frozen. ■

Based on information provided by economist John B. Parker, Jr., Agriculture and Trade Analysis Division, Economic Research Service.

Chile Will Likely Plant More Radiata Pine for Export by the Year 2000



Source: *Global Issues And Outlook In Pulp and Paper, 1988.*

U.S. Agriculture Continues Its Financial Recovery

In 1990, U.S. agriculture continued to recover from the financial problems of the early and mid-1980's, according to the most recent Farm Costs and Returns Survey (FCRS).

USDA has been using the FCRS to assess the financial health of the Nation's farm businesses for 7 years. Enumerators across the country are already gathering data for the eighth survey, which will cover 1991.

"For the majority of U.S. farms and ranches, the period of 1987 through 1990 can be characterized as a sustained recovery from the hard times of several years ago," reports economist Mitchell Morehart of USDA's Economic Research Service. "In 1989 and 1990, farm income reached record highs — 1989 was a particularly successful year."

In 1989 and 1990, farm income reached record highs.

Total assets for all farms surveyed averaged $410,600 in 1990, compared with $375,470 the previous year. Total average debt rose to $54,053 in 1990, compared with $51,522 the year before.

The proportion of all farms having positive net farm income was 61.5 percent in 1990, down from 62.4 percent a year earlier.

Enid Hodes

"The overall financial performance of farm operations can be evaluated by examining the debt/asset ratio, a measure of solvency, and net farm income, a measure of long-term profitability," Morehart explains. Operations in a favorable financial position are defined as having a positive net income and a debt/asset ratio of less than 40 percent.

Fifty-five percent of farms and ranches were in a favorable financial position in 1990 — down slightly from 55.5 percent a year earlier but considerably higher than the 47.8 percent of 1986.

"A combination of negative net farm income and high debt resulted in 7 percent of farms being classified as vulnerable in 1990," Morehart says. This figure represents the first increase in the percentage of vulnerable farms (up from 6.8 percent a year earlier) since 1986, when 11.6 percent of farms fell into this category.

In 1990, over half of the farms with gross sales of $250,000 or more had net farm income of at least $40,000. In contrast, 46 percent of farms with gross sales under $40,000 had negative net farm income. About two-thirds of all farms had gross sales below $40,000. These operations are typically part-time farm businesses that have access to off-farm earnings.

A higher percentage of farm operations in the two largest economic sales classes (those with gross sales of $250,000-$499,999 and those with $500,000 or more) turned a profit in 1990 than a year earlier. "Moreover, these farms also increased the amount of their profits," Morehart reports.

Other major findings of the survey covering 1990 include:

- Farms with gross sales of over $250,000 turned in their strongest annual financial performance to date. Nearly two-thirds of farms with $250,000-$499,999 in gross sales were in a favorable position.
- On the other hand, fewer farms with gross sales below $100,000 were in a favorable financial position, and more of them were rated as vulnerable.
- Farms in Appalachia and the Corn Belt were in the best overall financial condition, with the highest percentage of favorable operations (65.3 and 60.6 percent, respectively) and the lowest share of vulnerable operations (4.8 and 5.7 percent). The Mountain and Pacific regions had the highest proportion of vulnerable operations — 9.5 and 9.8 percent, respectively.
- More than 75 percent of tobacco farms turned a favorable financial performance — the highest share of any production specialty.

Income Varied by Region, Specialty

Between 1987 and 1990, farmers' gross cash income expanded by 10 percent--but cash expenses rose by almost 12 percent. Income from livestock sales grew by 13

percent over the period, and crop sales by more than 23 percent.

Net farm income averaged $13,458 in 1990, slightly below the $13,673 of the previous year, but well above the $11,545 of 1987. Average net farm income of operations with gross sales of at least $40,000 was nearly $42,000 in 1990, compared with $34,000 in 1987. Farms in this sales class are generally considered to be "commercial-size farms," where farming is the primary occupation.

The Appalachia, Lake States, Northern Plains, and Pacific regions experienced their highest average net farm incomes in 1990--$8,009, $15,725, $24,210, and $18,429, respectively.

Average net farm income in the Northeast dropped from $15,567 in 1989 to $11,486 in 1990, while that of the Mountain region dropped from $24,651 to $22,161. Higher operating expenses outpaced income growth in these regions.

The Corn Belt and Southern Plains regions, despite lower expenses, also registered declines in net farm income. The average for the Corn Belt slipped from $16,723 in 1989 to $15,182 in 1990, while that for the Southern Plains dropped from $11,775 to $4,092.

Only the Delta, Northern Plains, and Pacific regions showed gains in the proportion of farms with positive net farm income between 1989 and 1990.

Farms in the Southeast showed greater variability in the level of net earnings: Although fewer farms in the region had positive net income in 1990 than in the previous year, the share of farms with net income of $40,000 or more rose by over 2 percentage points.

At least one out of every four cotton, nursery or greenhouse, and dairy operations registered net farm income of $40,000 or more in 1990.

Farms in the Largest Economic Sales Classes Were More Likely To Be in a Financially Favorable Position in 1990

	Favorable	Marginal Income	Marginal Solvency	Vulnerable
	Percent			
Economic class, by gross sales				
$500,000 or more	62.5	15.3	17.8	4.4
$250,000 - $499,999	65.2	10.9	17.1	6.8
$100,000 - $249,999	62.6	15.6	16.2	5.6
$40,000 - $99,999	61.5	19.6	13.2	5.7
Less than $40,000	51.9	38.2	2.3	7.6
Region:				
Northeast	49.7	37.7	6.1	6.5
Lake States	54.7	28.6	9.7	7.0
Corn Belt	60.6	27.4	6.3	5.7
Northern Plains	58.1	20.4	12.9	8.6
Appalachia	65.3	26.3	3.6	4.8
Southeast	52.7	36.1	3.9	7.3
Delta States	54.2	30.5	7.9	7.4
Southern Plains	46.8	41.4	4.0	7.8
Mountain	49.5	32.4	8.6	9.5
Pacific	46.6	40.5	3.1	9.8
Production specialty:				
Cash grain	59.7	23.5	10.2	6.6
Tobacco	75.8	13.2	6.9	4.1
Cotton	48.1	23.2	18.1	10.6
Other field crops	50.1	33.6	4.7	11.6
Vegetables, fruits, tree nuts	58.6	30.4	4.3	6.7
Nursery, greenhouse	59.2	31.3	6.0	3.5
Beef, hogs, sheep	52.0	37.6	3.5	6.9
Poultry	51.3	20.7	16.7	11.3
Dairy	66.4	14.6	14.2	4.8
Other livestock	37.5	50.9	2.8	8.8

Source: 1990 Farm Costs and Returns Survey.

Balance Sheet Improved

The financial position of farms improved steadily during 1987-90. "On average, assets grew by nearly 18 percent over the period, and farm business debt fell by 11 percent," Morehart says.

The average debt/asset ratio for all farms was 13 percent in 1990, down from 14 percent a year earlier and 17 percent in 1987. Nevertheless, in every economic sales class, there were fewer farms with little or no debt in 1990 than the year before.

The share of farms with debt/asset ratios above 40 percent has declined each year since peaking in 1986, when over one-fifth of the farms fell into this category. The proportion of total farm business debt owed by these farms dropped from 67 percent in 1986 to 47 percent by 1990.

The reduction in the number of highly leveraged farms was even more evident in the

highest debt/asset category: In 1990, only 3.6 percent of farms had debt/asset ratios above 70 percent, compared with 4.5 percent the previous year and 6.9 percent in 1987.

"The extent of improvement in the financial position of farm businesses since 1987 varied considerably according to economic sales class," Morehart reports. The average debt/asset ratio for the largest farms (those with gross sales of at least $500,000) declined from 26 percent in 1987 to 18 percent in 1990. Their improved financial position is also reflected in an average 48-percent gain in equity over the period.

At the other end of the sales class spectrum, farms with gross sales below $40,000 showed relatively little change in distribution by debt/asset ratio.

"A striking divergence from the positive trends in the balance sheet of U.S. farms over the last several years occurred among farms with gross sales of $250,000 to $499,999," Morehart says. These farms had an 11-percent increase in average equity between 1987 and 1990--the smallest gain of any sales category. In 1990, their debt/asset ratio averaged 20 percent--the highest of any category.

Morehart attributes these findings to the fact that farms in this sales category engaged in the greatest amount of debt-financed expansion over the period. Nevertheless, these operations still did well overall, with their proportion of operations in a favorable financial position climbing from 54.3 percent in 1987 to 65.2 percent in 1990.

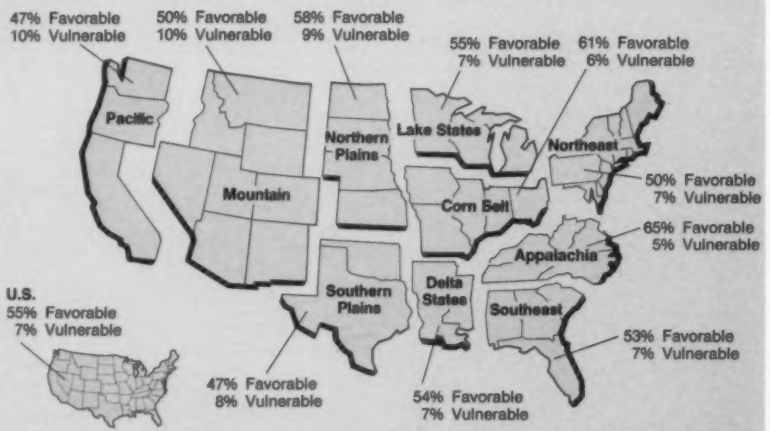
Among the regions, farm operations in the Lake States showed the greatest financial improvement from 1987 to 1990. This region's proportion of favorable farms grew from 45.9 to 54.7 percent, and its proportion of vulnerable farms decreased from 11.6 to 7.0 percent.

Unlike other areas of the country, the financial performance of farm operations in the Northern Plains and Mountain regions showed relatively little change between 1987 and 1990.

The proportion of vulnerable farm businesses that specialize in the production of cash grains declined from 26 percent in 1987 to 18 percent in 1990--the biggest drop for any production specialty. Dairy farms also showed a pronounced reduction in the number of vulnerable operations over this period.

Morehart explains that the marked decline in the proportion of vulnerable cash grain and dairy farms is due in part to the number of exits from farming among those specializing in these commodities over the last few years. "A large dairy herd buyout occurred during the period, and some cash grain

The Northern Plains, Mountain, and Pacific Regions Had the Highest Proportions of Financially Vulnerable Farms in 1990



Source: 1990 Farm Costs and Returns Survey.
Farms in favorable financial condition have both positive net income and low debt; farms rated vulnerable have negative income and high debt.

The Balance Sheet for All Farms Has Improved Steadily Over the Last Few Years

	1987	1988	1989	1990
Total assets	$349,362	$343,516	$375,470	$410,600
Current assets	$75,535	$51,177	$50,830	$57,111
Livestock inventory	$9,463	$9,257	$11,478	$15,322
Crop inventory	$11,308	$9,441	$11,776	$11,966
Purchased inputs	$1,767	$1,836	$1,385	$1,502
Prepaid insurance	$357	$352	$394	$408
Other assets[1]	$52,639	$30,293	$25,797	$27,913
Noncurrent assets	$273,827	$292,339	$324,640	$353,490
Investments	$2,079	$1,472	$1,041	$1,072
Land and buildings[2]	$215,378	$233,852	$264,535	$291,586
Farm equipment	$39,042	$39,021	$41,303	$43,663
Breeding animals	$17,328	$17,994	$17,760	$17,169
Total debt	$61,069	$51,684	$51,522	$54,053
Current liabilities	$15,875	$14,237	$15,309	$14,117
Notes payable within 1 year	$7,575	$4,728	$5,443	$4,981
Current portion of term debt	$4,519	$5,950	$6,254	$5,203
Accrued interest	$1,583	$1,444	$1,437	$1,504
Accounts payable	$2,197	$2,116	$2,174	$2,428
Noncurrent liabilities	$45,194	$37,447	$36,213	$39,937
Real estate	NA	$25,645	$22,740	$32,046
Non-real estate	NA	$11,802	$13,473	$7,890
Average debt, by lender:				
Farmers Home Administration	$8,403	$7,250	$6,821	$5,879
Farm Credit System	$13,487	$12,294	$11,646	$11,707
Commercial banks	$19,015	$19,204	$20,225	$21,734
Other	$11,864	$9,378	$9,219	$10,802
Commodity Credit Corp. crop loans[3]	$3,364	$2,061	$1,108	$970
Equity	$288,293	$291,832	$323,948	$356,547
Debt/asset ratio	0.17	0.15	0.14	0.13

NA = Not available.

1 Includes accounts receivable, certificates of deposit, checking and savings balances, and any other financial assets of the farm business. 2 The value of the operator's dwelling and any associated liabilities were included if the dwelling was located on the farm. 3 These loans were excluded from both assets and liabilities.

Source: Farm Costs and Returns Surveys.

farms were hard-hit by the 1988 drought," he says. "These factors effectively reduced the number of farms in these specialties, particularly the financially vulnerable ones."

"Operations that mainly produce beef, hogs, or sheep have traditionally had the largest number of vulnerable farms of any production specialty," Morehart says, "and their proportion of vulnerable operations rose from 34 percent in 1987 to 45 percent in 1990."

Morehart expects that in the short run, the composition of the Nation's vulnerable farm operations will undergo further change. High demand for feed and strong prices will give impetus to the trend toward fewer vulnerable cash grain farms, he says.

"In addition, relatively low dairy receipts may strain those operations which did not benefit from the comparatively high prices of 1989-90," he says. "The Northeast, Lake States, Corn Belt, and Southern Plains will likely experience the effects of this trend the most keenly."

Similar prospects for the hog sector may lead to more geographically dispersed financial difficulties, Morehart adds. "Many farms that primarily produce hogs ended 1990 in relatively strong financial shape," he says. "But opportunities for them to expand — to capitalize on their success — could be delayed by the prospect of lower receipts." ■

Based primarily on information provided by economist Mitchell Morehart, Agriculture and Rural Economy Division, Economic Research Service.

Mexico and the U.S. Linked by Strong Agricultural Trade

Each winter, fresh Mexican tomatoes make the long trip north to the United States, garnishing graceful table settings or settling into salad bars and sandwiches.

In fact, tomatoes make up a third (or more) of U.S. imports of fresh vegetables from Mexico. Cucumbers, peppers, and squash also figure in the mix of Mexican winter vegetables imported to meet the tastes of Americans accustomed to easy and wide availability of these items.

The North American Free Trade Agreement — currently being negotiated by representatives of Canada, Mexico, and the United States — could affect the flow of Mexican fruits and vegetables into the U.S. and Canadian winter markets, says economist Richard Brown of USDA's Economic Research Service (ERS).

In the future, cartons of tomatoes and cucumbers stamped "grown in Mexico" or "producto de Mexico" may become a more integral part of U.S. wholesalers' operations — while at different times of the year cartons of tomatoes stamped "grown in the United States" or "product of the United States" may become a part of Mexico's marketing operations.

How a free trade agreement would affect U.S.-Mexico trade is impossible to tell yet.

Just how a free trade agreement would affect agricultural trade between the United States and Mexico is impossible to tell at this point, since the exact provisions of such an agreement could take any of numerous forms, each having different, and specific, implications for trade patterns. Any change, though, will take place within the context of the situation prevailing at the time of the agreement.

This article, the second of a two-part series, takes a detailed look at U.S.-Mexican agricultural trade in recent years. Brown assembled the following trade information by major commodity grouping.

Animals and Animal Products — From 1985 to 1989, U.S. exports of these commodities to Mexico, which averaged about $580 million a year, represented 10 percent of the value of all U.S. livestock and livestock product exports. U.S. imports of similar commodities from Mexico during the same period averaged $418.1 million a year, and accounted for about 10 percent of the value of all U.S. imports of these products.

In 1990, U.S. exports of livestock and livestock products, including poultry, made up 26 percent of total U.S. agricultural exports to Mexico. Breeding cattle alone represented 58 percent of the value of U.S. live animal exports to Mexico, and Mexico is the largest export market for U.S. pigs and hogs.

U.S. beef and pork exports to Mexico have increased rapidly over the past several years. U.S. beef exports to Mexico in 1990 totaled 28,498 metric tons, valued at $80.8 million, compared with only 1,672 metric tons, valued at $3.9 million, in 1985. But Mexico is only the third or fourth largest export market for U.S. beef and veal and

Courtesy Inter-American Development Bank

Irrigating corn fields in Hidalgo

The United States and Mexico Are Working Closely On Food Safety Issues

Few issues command as many headlines — or cause as much concern on the part of consumers — as the safety and handling of food. That's especially true in the case of produce, which may retain potentially harmful pesticide residues for long periods after initial application.

And in the public debate over the North American free trade proposal, questions have been raised over Mexico's regulation and use of pesticides, says ERS economist Richard Brown.

But even if exports of Mexican produce to the United States increase after the signing of a free trade agreement, the United States will continue to maintain its tough inspection vigil, according to the "Review of U.S.-Mexico Environmental Issues," prepared by an interagency task force coordinated by the Office of the U.S. Trade Representative.

"All food products imported into the United States from Mexico or any other country must comply with the U.S. Environmental Protection Agency's (EPA) tolerance regulations for residues in food," says the report. "These standards and procedures would not change under a free trade agreement."

The U.S. Food and Drug Administration (FDA) monitors imports for compliance with the EPA tolerances, and takes enforcement action when necessary. USDA provides inspection services for meat, poultry, and fresh produce imports. These products are also subject to inspection by FDA, but FDA primarily monitors processed food and drug products.

The report notes that "Mexico is one of the leading exporters of fruits and vegetables to the United States, accounting for about a third of U.S. produce imports. Because of the large volume of imports coming from Mexico, the FDA devotes a substantial portion of its monitoring efforts to Mexican products: More than a quarter of the imported food samples collected by FDA annually for pesticide residue surveillance are from Mexico."

Data from FDA's monitoring reports (including information from USDA) indicate that over the years, Mexico has improved its compliance with published U.S. pesticide tolerances for imported commodities — although the percentage of violations varies slightly from year to year.

The report goes on to say that as "long as products imported from Mexico meet U.S. standards, no additional hazards to health or the environment would result from an increase in trade under a free trade accord."

The United States and Mexico have worked closely on these issues and will continue to pursue ways of ensuring the safety of imports, says the report. For instance, EPA is studying information on pesticide registrations in Mexico. The aim here is to find ways to reduce any remaining residue violations and to determine where there are differences in pesticides registered for use.

the second largest market for U.S. pork. In 1989, U.S. pork exports to Mexico came to 23,354 metric tons (with a value of $56 million), compared with 10,110 metric tons (with a value of $8.7 million) in 1985. Pork sales, however, dropped to 14,603 metric tons in 1990.

Mexico is a net importer of dairy products. But Canada and New Zealand, as well as some members of the European Community, are the largest foreign suppliers of dairy products to this Latin American country. U.S. dairy exports to Mexico in 1990 dropped to $59 million — after exceptionally large sales of $136 million in 1988 and $205 million in 1989. Nonfat dry milk, cheese, and butter are the principal components of this dairy trade.

Mexico is one of the leading markets for U.S. poultry and poultry product exports. From 1985 to 1989, the United States exported an average of $41.8 million worth of poultry and poultry products to Mexico each year. But in 1990, the total value of U.S. poultry exports to Mexico surged to $72.6 million. The strongest component of this U.S. poultry trade is meat, accounting for 79 percent of all poultry product exports to Mexico in 1990.

Mexican exports of animals and animal products accounted for 17.9 percent of that country's total agricultural exports to the United States in 1990.

The United States is the primary export market for Mexican feeder cattle. From 1985 to 1989, U.S. imports of Mexican feeder cattle averaged $244 million, representing 95 percent of the value of U.S. imports of livestock and livestock products from Mexico. In 1990, Mexican feeder cattle exports to the United States were valued at $420 million and exceeded 1.2 million head.

Grains and Feeds — The United States enjoys a large trade surplus with Mexico in grains and feeds. U.S. exports of grain and feed products to Mexico during the 1985-89 period averaged $548 million annually, with exports of nearly $1 billion in both 1989 and 1990. U.S. imports of grain and feed products from Mexico during the same period averaged $30 million a year.

Prior to 1988, Mexico had been nearly self-sufficient in food wheat. However, since then a series of poor crops has forced Mexico to import large quantities of wheat from the United States, and modest amounts from other exporting nations.

During the mid-1980's, Mexico also imported significant amounts of feed wheat from Canada and Australia, reducing sales opportunities for U.S. corn, sorghum, and other feed grains. But Mexico has not achieved self-sufficiency in coarse grain production, and the United States remains the dominant foreign supplier of coarse grain to the Mexican market. From 1985 to 1989, the United States supplied 96 percent of Mexico's corn and sorghum import requirements. In 1989 and 1990, U.S. exports of feed grains to Mexico surpassed 6.0 million metric tons, with an estimated value of $700 million annually.

Horticultural and Tropical Products — Mexico is an important source of U.S. imports of horticultural and tropical products. Mexican exports of such products to the United States averaged $1.6 billion annually from 1985 to 1989, but climbed to $2.0 billion in 1990 on strong demand in the United States in 1989 and 1990. In contrast, U.S. exports of these products to Mexico over the same period averaged $130 million, and reached more than $315 million in 1990. In relative terms, U.S. horticultural exports to Mexico have been increasing faster than Mexico's horticultural exports to the United States.

Coffee, beverages, and fruits and vegetables accounted for about 72 percent of total Mexican agricultural exports to the United States in 1989. Fresh tomatoes provided 33 percent of the total value of fresh and frozen vegetable imports from Mexico in 1989, and 41 percent in 1990.

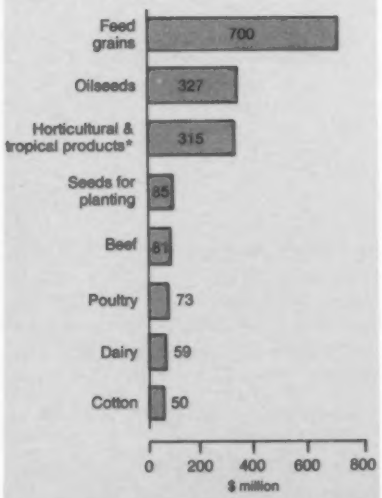
On the other side of the trade picture, dried beans and sugar were by far the largest of the U.S. horticultural and tropical product exports to Mexico in 1990, with shipments valued at over $197 million. Fresh deciduous fruit exports also continued to expand in 1990.

The growth in U.S. horticultural product exports to Mexico is the result of many factors, including Mexican trade liberalization in recent years that has generally lowered tariffs and eliminated some import licensing requirements, says Brown.

Oilseeds and Products — The United States has a large trade surplus with Mexico in oilseeds and oilseed products. From 1985 to 1989, U.S. exports of these products to Mexico averaged $432.2 million. U.S. trade flows were relatively stable from 1985 to 1987, at $300-$400 million, but rose to $612 million in 1988 before falling to $443 million in 1989, and to $327 million in 1990. Mexico's sales to the United States, meanwhile, increased steadily from $21.9 million in 1985 to $43.7 million in 1990, primarily on the growing U.S. demand for Mexican sesame seed.

Cotton — Both the United States and Mexico continue to be major exporters of cotton (excluding linters), but Mexico has steadily increased its imports from the United States

Feed Grains Led U.S. Agricultural Exports to Mexico in 1990



*Such as dried beans, sugar, and fresh fruits.

Tomatoes are one of Mexico's prime exports to the United States

since 1985. U.S. imports from Mexico, though, declined from a few thousand metric tons in the early 1980's to zero in 1989 and 1990. But whenever either country has imported cotton in recent years, the other country has usually been the primary supplier. In 1990, Mexico purchased nearly $50 million worth of cotton from the United States. U.S. and Mexican upland cottons are of similar quality and remain competitive in the largest Asian markets — Japan, China, and South Korea.

Seeds for Planting — Mexico is traditionally one of the United States' top markets for field and garden seeds. During the 1980's, exports to Mexico fluctuated around the $50-million level. In 1989, though, shipments more than doubled, setting a new record of $131 million. Shipments declined to $85 million in 1990 — well below the record of the previous year, but still considerably higher than earlier in the 1980's.

U.S. planting seed exports to Mexico depend largely upon the Mexican Government's import restrictions, and on weather conditions during Mexico's growing season, which determine the volume and quality of its domestic seed supplies. The 1989 export record was prompted by a Mexican drought that required extraordinary imports of corn, grain sorghum, and soybean seeds. Mexico also ranks as the tenth largest foreign supplier of planting seeds to the United States, with shipments worth about $5.0 million in 1989 and 1990. ■

Based primarily on information provided by economist Richard Brown, Agriculture and Trade Analysis Division, Economic Research Service.

Indonesia: A Promising Market for U.S. Farmers

When Columbus sailed from Spain in 1492, he was seeking a new trade route to the Spice Islands of Indonesia. Today, Indonesia's growing population and rising per capita income make that country an attractive market for U.S. farm exports, according to economist Ron Trostle of USDA's Economic Research Service (ERS).

The population, now 184 million, is growing at an annual rate of 1.9 percent. The world's fifth most populous nation, Indonesia has almost four times the population density of the United States.

The average income of Indonesians has grown about 6 percent per year since 1986, to $430 per person per year in 1990. Trostle calls this income growth rate "among the highest" of the world's economies.

The recent rise in personal income enables the country to import and consume a wider variety of goods. Such food items as dairy products, fresh fruits, frozen potatoes and other vegetable preparations, processed meat, and wheat from the United States are in demand, as well as such nonfood items as cotton and feedstuffs. "As income increases," Trostle says, "Indonesians are switching from such traditional foods as cassava, a root crop, to pasta and other processed foods." In fact, he adds, over the past 30 years increases in protein consumption from animal products and cereals have improved the Indonesian diet.

In 1990, Indonesia's Exports of Agricultural Products to the United States Dwarfed Its Imports From Us

Exports to U.S.	$ million	Imports from U.S.	$ million
Rubber	422.1	Cotton	178.0
Spices	62.6	Wheat	30.0
Coffee	49.6	Feeds & fodder	15.8
Cocoa	45.6	Soybeans	14.0
Mushrooms	25.8	Tobacco	7.5
Coconut oil	25.4	Vegetables	3.2
		Poultry	2.9
		Beef	2.4
		Dairy products	1.1
Other[1]	52.8	Other[1]	17.2
Total	683.9	**Total**	272.1

[1]Other imports include baby chicks, apples, grapes, and almonds. Other exports include tea, cashews, pineapples, and vanilla.

Indonesia's agricultural exports to the United States are expected to remain stable in the 1990's, but its imports from us may expand. In 1990, Indonesia exported $685 million worth of agricultural products to the United States, and imported $272 million from us.

The United States imports rubber, spices, coffee, tea, cocoa, pineapples, canned mushrooms, raw tobacco, and coconut oil from Indonesia. We also export a variety of products to that country, with soybeans and processed foods showing the greatest promise for expansion.

Indonesia's per capita income has been growing as an indirect result of its abundant, low-cost labor, Trostle explains. "As average wage rates in Japan, South Korea, and Taiwan have gone up, foreign investors look to Indonesia for labor." He notes that many Indonesians are employed in light industry, assembling electronic products and automobiles.

In the last decade, the Indonesian Government stimulated growth in per capita income through such policies as deregulating banks and financial markets, liberalizing trade policies, lifting barriers to foreign investment, and promoting better telecommunications—all of which facilitate production and investment. Such measures have encouraged the proliferation of small companies, creating more jobs, enhancing productivity, and boosting workers' earnings.

Besides rising incomes, other factors will raise the demand for imported food, according to Trostle, such as population growth, increasing numbers of adults compared with children, and rapid urbanization.

"Agriculture is the largest sector in Indonesia's economy," Trostle notes. It accounts for about 25 percent of gross domestic product and nearly 60 percent of employment. About 14 million small farmers cultivate food crops, and about 1,800 large plantations produce such perennial export crops as rubber, oil palm, coffee, and tea. "The demand for agricultural land is intense," says Trostle.

Providing consumers with food at reasonable and relatively stable prices is one of several agricultural goals in the Government's latest 5-year development plan, begun in 1989.

Indonesians buy less food than Americans. For example, the average Indonesian consumes 60 grams of protein per day, while the average American consumes 109 grams per day—82 percent

Harvesting tea on a plantation in Java

Photos by Olive Hopkins

more than that in the typical Indonesian diet, Trostle says.

To meet its goals, the Government will need to encourage growth in sectors of the economy other than petroleum and natural gas, he adds. In the 1970's, oil exports boomed, providing about 70 percent of total export earnings. "But since 1981," Trostle says, "growth in petroleum and natural gas exports has been sluggish."

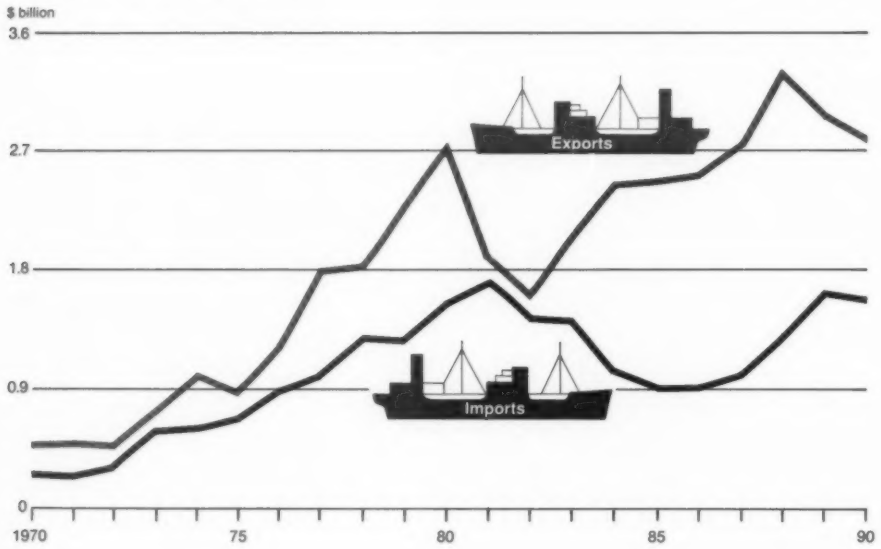
Accordingly, the Government implemented various austerity measures to restructure the economy and adjust to lower petroleum revenues. Funding for agricultural development, and for fertilizer and pesticide subsidies, has been cut.

Other agricultural goals of the 5-year plan include:

- Maintaining or achieving national self-sufficiency in rice and major secondary food crops (such as corn, cassava, soybeans, peanuts, and sweet potatoes) and improving diet,
- Raising farm incomes and improving rural income distribution,
- Creating employment for the rural population in agriculture and in agricultural processing industries,
- Increasing agricultural exports and reducing imports, and

Transplanting rice from a paddy to nearby fields that have been plowed and irrigated

Growth in Indonesia's Agricultural Exports Has Outstripped That of Its Imports



- Controlling budget subsidies to producers and consumers.

The sharp reduction of fertilizer subsidies has cut the cost of an expensive program. Indonesia subsidizes the production of corn, cotton, rice, and soybeans to limit expenditures on imports and to develop its agriculture.

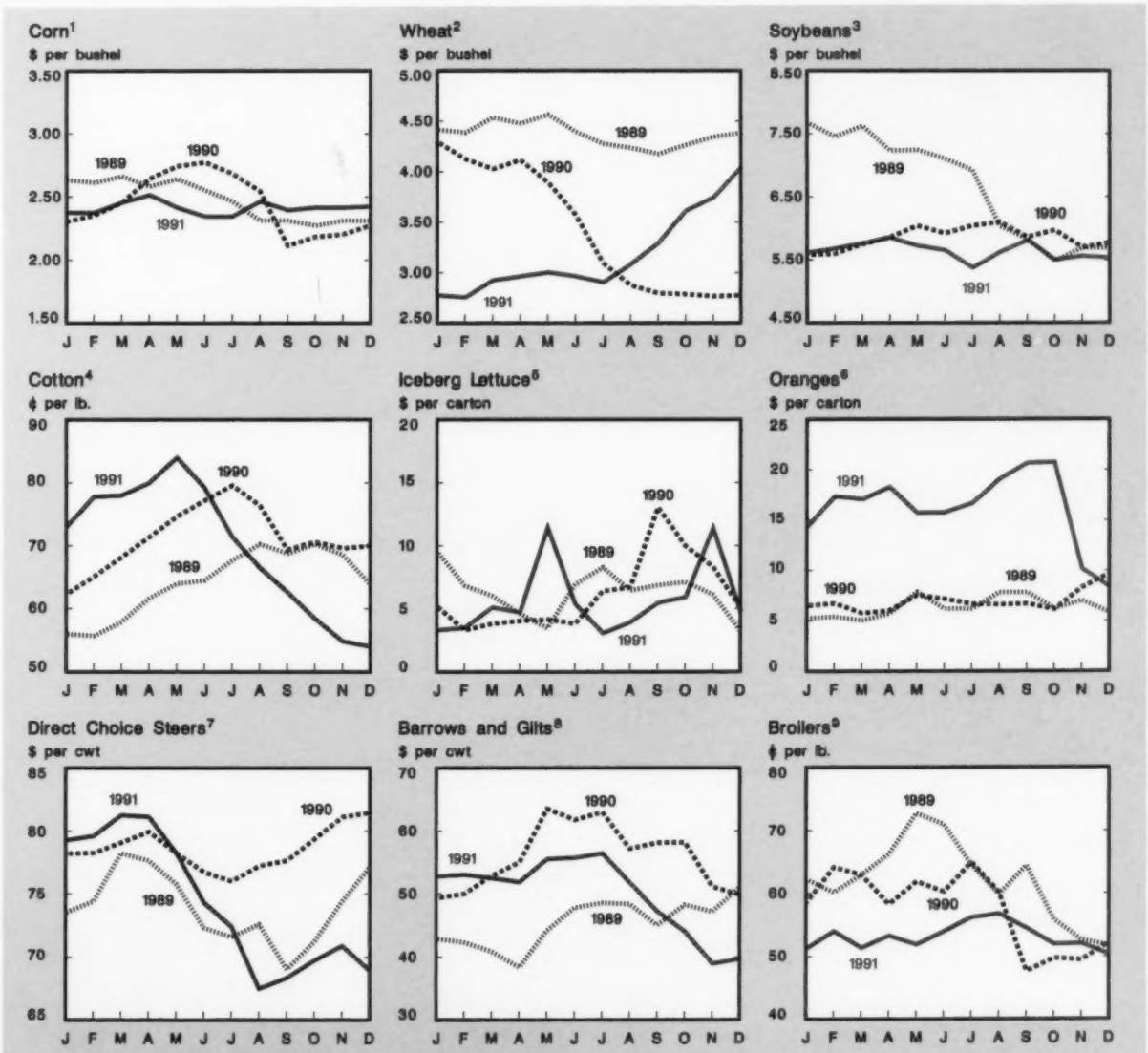
The projected population growth will increase the demand for food and put pressure on the Indonesian policymakers to decide whether marginal land shall be used for food crops other than rice or for such perennial tree crops as oil palm, coconut oil, and rubber—all big foreign exchange earners. At the same time, Trostle says, environmental concerns are coming to the forefront, especially the rate of deforestation on the outer islands.

"All of these factors are expected to increase both the quantity and the variety of Indonesia's agricultural imports," he concludes. ■

— Carol Lee Morgan

Monthly Price Monitor

USDA's December 1991 inflation-adjusted index of farm prices, from the National Agricultural Statistics Service's Agricultural Prices report, was 0.7% below November and 3.5% below a year earlier. Wholesale market prices follow. Corn held fairly steady at $2.42 per bushel, while wheat climbed to $4.04 per bushel—its highest price since April 1990. Soybeans dropped a few cents to $5.53 per bushel. Cotton slipped to its lowest price in 3 years, 53.9¢ per pound. Lettuce prices, at $4.72, were back to normal after a sharp increase in November caused by extreme weather conditions. Oranges, at $8.35 per carton, were below year-earlier prices for the only time in 1991. In the meat animals area, direct choice steers fell to $68.89. Barrows and gilts rose slightly to $39.61 per cwt. Broilers declined to 50.3¢ per lb., the lowest price since November 1990.



[1]No. 2 yellow, Central Illinois. [2]No. 1 HRW, Kansas City. [3]No. 1 yellow, Central Illinois. [4]SLM 1-1/16", spot market price. [5]Standard carton 24's, California-Arizona. [6]Central California, Standard carton. [7]Nebraska. [8]Omaha. [9]Wholesale, New York. All prices shown are monthly averages.

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